

REMARKS

Favorable reconsideration in view of the previous amendments and following remarks is respectfully requested.

Claims 27-29, 31 and 32 remain under examination. By this Amendment, claims 27-29 are amended. Claims 1-13 have previously been withdrawn as a result of the May 15, 2008 Restriction Requirement. Claims 14-26, 30 and 33-37 have previously been canceled.

Applicants appreciate the courtesies extended to Applicants' representative during the November 10, 2009 telephone discussion. The substance of the discussion is incorporated into the amendments and remarks herein and constitutes Applicants' record of the discussion.

The Office Action objects to claim 28. This objection is respectfully traversed. Claim 28 is directed to a refrigerant flow channel separator in a refrigerator flow channel whereas claim 27 is directed to a flow channel which separates the flow channel of a pipe that is a flow channel connected to a compressor. Thus, claim 28 does further limit the subject matter of claim 27.

The Office Action rejects claims 27 and 28 under 35 U.S.C. §102(b) over EP-0926452 to Sanagi; rejects claims 27 and 28 under 35 U.S.C. §102(b) over JP 11-107959 to Fujiwara et al.; rejects claims 31 and 32 under 35 U.S.C. §103(a) over Sanagi; and rejects claims 29, 31 and 32 under 35 U.S.C. §103(a) over Fujiwara. These rejections are respectfully traversed.

Applicants' independent claim 27 recites pressure pulsation reduction equipment of refrigeration cycle equipment, comprising a refrigeration cycle including a compressor which is connected to a pipe that is a flow-channel. A pressure

pulsation reducer is installed on at least one of a high pressure side and a low pressure side of the compressor. The pressure pulsation reducer includes a flow channel separator which separates the flow channel of the pipe into at least a first flow channel and a second flow channel and a plurality of small holes are formed downstream of the area where the flow channel separate. The flow channel separator is formed open on one end and downstream of where the flow channels separates, the flow channel separator is in contact with a flow channel wall in the pipe on another end.

Such a feature encompasses Applicants' exemplary embodiment as illustrated in Fig. 23 wherein refrigeration cycle equipment includes a compressor 20. Pressure pulsation reduction reducer 30 includes a passage barrier 14 and small holes 9. The flow channel separator formed by the passage barrier 14 is formed open on one end and downstream of where the flow channel separates is in contact with the pipe flow channel wall on another end. The small holes 9 are located downstream of the area where the flow channel separates.

The Sanagi reference does not disclose this combination of features of Applicants' independent claim 27. In particular, the Sanagi reference does not disclose a refrigeration cycle or compressor connected to a pipe that is a flow-channel. The Examiner asserts that a shroud 5c corresponds to the claimed flow channel separator. However, the shroud 5c, as well as the other portions that make up the centrifugal fan, including the blade 6 and the hub 4, is never in contact with the flow channel wall formed by the cylindrical bell portion 8 as well as the casing 2. Further, the shroud 5c only forms a single flow channel because the centrifugal fan is circular. There is nothing separating the air that flows through the heat exchanger 9.

The Examiner also identifies the plurality of small holes which appear to be formed in the hub 4b. These alleged plurality of holes are not located downstream of the area where the flow channel separate because there is no prior separation of the flow channel. A claim is anticipated only if each and every element is set forth in the claims found, either expressly or inherently described as single prior art reference. See MPEP §2131. Applicants respectfully submit that an anticipation rejection cannot be made using the Sanagi reference because every element of the claim is not shown in the reference.

As described beginning at line 20 of page 49 of Applicants' specification, when a refrigeration cycle equipment starts operating, a fluid flowing into the pressure pulsation reduction means 30 passes through the passage narrowed by the passage barrier 14. This accelerates the flow speed of the fluid. Consequently, static pressure at both ends of the small holes 9 provided around the passage is higher outside than inside. This forms a flow through the small holes 9. Then the fluid flowed into the narrowed passage through the small holes 9 meets a fluid flowing through the narrowed passage and is discharged from the pressure pulsation reduction means 30.

The Fujiwara reference discloses a rotary compressor having a discharge tube 35. The discharge tube penetrates the upper part of well closed container 3. An end 37 of the discharge tube is blocked using a plate 39. Two or more apertures are formed on the circumference of the discharge tube 35. The plate 39, which the Examiner alleges corresponds to the claimed flow channel separation in contact with a flow-channel wall, is not downstream of where the flow channel separates. Also,

the apertures 41 are not formed downstream of the area where the flow channel separates as in Applicants' amended independent claim 27.

The Examiner asserts that placing a pressure pulsation device either at a discharge site of the compressor or a suction site of the compressor or in an oil separator is nothing but rearranging a part of an invention. However, the pressure pulsation reducer of Applicants' claimed invention is not a mere re-arrangement of the same parts as that disclosed by the references. Different parts are used and achieve a different effect. As described in Applicants' as-filed specification, for example, with respect to Fig. 35, the passage barrier 14, on the downstream side, is formed into a nozzle so as to blow a fluid through a narrowed passage. Then, small holes 9 are provided on the duct wall of the passage barrier 14 before the nozzle portion. Such a configuration allows a fluid flowing into the pressure pulsation reduction means 30 to be reduced in pressure at the nozzle portion of the passage barrier 14 and then blown out. This causes a pressure difference between, before and after the nozzle portion of the passage barrier 14. Consequently, a pressure difference exists between the ends of the small holes 9 provided on the duct wall of the passage barrier 14 before the nozzle portion. This forms a flow through the small holes 9. Thus, the pressure pulsation propagated from the inflow side of the passage barrier 14 is reduced at the section where small holes 9 are provided.

Thus, Fujiwara does not disclose a pressure pulsation reducer including a flow channel separator which separates a flow channel into at least a first flow channel and a second flow channel and a plurality of small holes forming the first flow channel and a nozzle forming the second flow channel, the nozzles formed downstream of the plurality of holes, the flow channel separator being formed open

on one end and, downstream of where the flow channel separates, in contact with a flow channel wall in the pipe on another end, as in Applicants' amended independent claim 27. Instead, Fujiwara discloses a single flow channel which is created by the plurality of apertures and a plate 39 located upstream of the apertures 41.

Dependent claims 28, 31 and 32 and independent claim 29 are allowable for at least the reasons discussed above with respect to independent claim 27, as well as for the individual features they recite.

Early and favorable action with respect to this application is respectfully requested.

Should any questions arise in connection with this application, or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

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